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EXAMINER	
MADDEN, GREGORY VINCENT	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/705,272	CAZIER, ROBERT P.
	Examiner	**Art Unit**
	Gregory V. Madden	2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1, 6, 10, 15, and 18 have been considered but are moot in view of the new ground(s) of rejection.

Applicant has amended the claims to include the limitation of "*wherein the processing circuitry simultaneously changes the gain while the images are being recorded of a subject to mimic actual human movement to and from the subject as the zoom level changes and wherein the processing circuitry creates betadata having a pointer to a file name of the recorded image, and during postview, alters the betadata to automatically increase the volume of associated audio as the image is cropped by automatically determining a scale of the gain of the audio amplifier using an original picture size as a reference.*" While the Examiner does agree that none of the Kawamura, Kudo, Anderson, or Kincaid references teaches the newly-added limitations set forth above, the Applicant's arguments are moot in view of a new ground of rejection. Specifically, further in view of the Kawamura, Kudo, and Kincaid references, the Examiner believes that the Nagao reference (U.S. Pat. 6,573,909) teaches that during postview zooming (cropping or zooming a previously-captured image), the processing circuitry automatically increases the volume of associated audio as the image is cropped by automatically determining a scale of the gain of the audio amplifier using an original picture size (i.e. an original resolution) as a reference. Further, while the Nagao reference alone fails to teach that the processing circuitry creates betadata having a pointer to a file name of the recorded image, and then alters the betadata to increase the volume of the audio based on a zoom position, the Examiner believes that the created metadata of Kincaid, as discussed in the previous rejection to claim 3, is equivalent to the newly-claimed betadata that is altered to increase the volume of audio based on a zoom position. As taught in Col. 4, Lines 1-17, the Kincaid reference shows that metadata (or "betadata") is created and associated with a specific track, and that the metadata can be

altered to automatically increase the volume of the audio. Therefore, as will be set forth in further detail below, the Examiner believes that the combination of Kawamura, Kudo, Kincaid, and Nagao teaches the newly-amended subject matter of claims 1, 6, 10, 15, and 18, and thus these claims remain rejected under 35 U.S.C. 103. Also, the rejection of each of the dependent claims is maintained in view of the previous rejections, as will be set forth in further detail below.

Finally, it is noted that the Applicant has amended claim 17, which was previously objected to for a typographical informality. The amendment to the claim has overcome the previous objection, and thus the objection is hereby withdrawn.

Specification

The disclosure is objected to because of the following informalities: In the "Cross Reference to Related Applications" section of the specification, the related copending application number has been left blank. The line should read --This application is related to copending application serial number 10/705,265...--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamura et al. (U.S. Pat. 6,931,138) in view of Kudo (U.S. Pat. 6,919,925), further in view of Kincaid (U.S. Pat. 7,072,477), and still further in view of Nagao (U.S. Pat. 6,573,909).

First, regarding **claim 1**, the Kawamura reference teaches a camera (video camera or digital camera) comprising processing circuitry (zoom control section 12) that comprises a control algorithm that implements an automated zoom control function that automatically records images having different zoom levels while recording, and which, upon playback, adjusts the gain of an audio amplifier (via volume control section 15) to adjust the sound output volume in an amount related to the zoom level recorded by the zoom control function, wherein the processing circuitry (zoom control section 12) simultaneously changes the gain while the images are being recorded of a subject to mimic actual human movement to and from the subject as the zoom level changes. Kawamura further discloses that the camera comprises an audio amplifier (19a-c) (See Fig. 1, Col. 6, Line 24 – Col. 7, Line 10, and Col. 9, Lines 23-47). What Kawamura fails to teach is the specifics of the camera features, primarily that the camera comprises a record button, a lens, an image sensor for receiving images viewed by the lens, and a speaker. Further, Kawamura does not disclose that the camera performs postview zooming, and that the processing circuitry creates betadata having a pointer to a file name of the recorded image, and during postview, alters the betadata to automatically increase the volume of associated audio as the image is cropped by automatically determining a scale of the gain of the audio amplifier using an original picture size as a reference. However, noting the Kudo reference, Kudo teaches a camera (video camera 100) comprising a record button (trigger switch 205), a lens (lens unit 101), an image sensor (CCD 102) for receiving images viewed by the lens, and a speaker (speaker unit 114) (See Figs. 1 and 2, and Col. 6, Line 54 – Col. 9, Line 5). Kudo also teaches that the camera has a postview (or playback) mode that presents the captured images on LCD display 208, wherein the images can be edited in the postview mode (See Col. 7, Lines 17-37). As for the processing circuitry creating betadata to automatically alter the audio volume, the Kincaid reference teaches an electronic device that creates betadata (or metadata) having a pointer to a file name (track name) that corresponds to recorded audio (perceived acoustic power value stored in a database with an audio track), wherein the metadata is altered to automatically increase the volume of the

audio (See Col. 4, Lines 1-17). Finally, considering the postview zooming wherein the volume of associated audio is increased as the image is cropped based on a scale using the original picture size as a reference, the Nagao reference teaches that during a postview zooming step (i.e. increasing the magnification of a captured image), the gain of the audio amplifier (amplifiers 58 and 59) is increased as the imaged is cropped (or magnified) using an original picture size (i.e. original resolution) as a reference, as is taught in Fig. 2 and Col. 4, Line 28 – Col. 5, Line 20. It would have been obvious to one of ordinary skill in the art to have included the record button, lens, image sensor, and speaker of Kudo, the betadata that is altered to control the volume of the audio (as taught by Kincaid), and the volume control in a postview zooming mode (as taught by Nagao), with the camera and automated zoom control function of Kawamura. One would have been motivated to do so because a record button, lens and image sensor allow the user to capture a desired scene for a preferred duration, while the speaker allows the user to hear the captured audio upon playback, thereby enabling the user to immediately verify the content of the captured scene. Further, by creating and altering betadata (or metadata) corresponding to recorded audio, the alteration of the audio based upon the zoom level is permanently attached to the recorded images, thereby allowing playback from various devices, not just the image capturing device, to have adjusted sound output volume in relation to a zoom level. And finally, as Nagao teaches in Col. 1, Lines 29-67, it is advantageous to alter the volume of captured audio when postview cropping or zooming takes place, as changes made by the user to the image data (such as zooming) can also be reflected in the audio data, giving the user a more realistic sensory observation of the postview image.

In regard to **claim 2**, the limitations of claim 1 are taught above, and the Nagao reference again teaches a digital zoom control wherein pixels of a recorded image are removed from the recorded image and the resultant image is scaled to its original size (i.e. the display system crops the next highest resolution image at the boundaries of the display window) to create the illusion of zoom capture, and wherein the control algorithm adjusts the gain of the audio amplifier (gain controller 53 adjusts the gain

of amplifiers 58 and 59) as a function of the digital zoom. Please refer to Fig. 2 and Col. 4, Line 28 – Col. 5, Line 20.

Considering **claim 3**, the limitations of claim 1 are taught above, and while Kawamura teaches a control algorithm that implements an automated zoom control function that automatically records images having different zoom levels while recording, and which, upon playback, adjusts the gain of an audio amplifier (via volume control section 15) to adjust the sound output volume in an amount related to the zoom level recorded by the zoom control function (See Fig. 1, Col. 6, Line 24 – Col. 7, Line 10, and Col. 9, Lines 23-47), the reference does not teach that the control algorithm, when viewing recorded images, creates metadata corresponding to recorded audio and alters the metadata to automatically increase the volume of the audio as apparent zoom is increased. However, as taught above with respect to claim 1, the Kincaid reference teaches an electronic device that creates metadata corresponding to recorded audio (perceived acoustic power value stored in a database with an audio track) and alters the metadata to automatically increase the volume of the audio (See Col. 4, Lines 1-17).

As for **claim 4**, the Kawamura reference teaches that the recording gain remains the same during recording (via pickup section 11), and the gain of the audio amplifier, and hence the audio output volume of a speaker (via volume control section 15) is increased during playback in an amount related to the zoom level (from zoom control section 12), as is taught in Col. 9, Lines 23-47.

Regarding **claim 5**, Kawamura in view of Kudo, further in view of Kincaid, and still further in view of Nagao teaches the limitations of claim 1 above, and while Kudo does teach that the camera comprises a speaker (speaker unit 114) (See Figs. 1 and 2) for emitting recorded audio, and the Kawamura reference teaches that the control algorithm automatically adjusts the output audio gain (see Col. 9, Lines 23-47), neither teaches that the camera has headphones coupled thereto, and that the control algorithm automatically adjusts headphone gain. However, referring to the Kincaid reference, Kincaid

teaches an electronic device having headphones coupled thereto in addition to or in lieu of a speaker (See Col. 6, Lines 33-37).

Next, considering **claim 6**, the Kawamura reference teaches a camera (video camera or digital camera) comprising processing circuitry (zoom control section 12) that comprises a control algorithm that implements an automated zoom control function that automatically records images having different zoom levels while recording, and which, upon playback, adjusts the gain of an audio amplifier (via volume control section 15) to adjust the sound output volume in an amount related to the zoom level recorded by the zoom control function. Kawamura further discloses that the camera comprises an audio amplifier (19a-c) (See Fig. 1, Col. 6, Line 24 – Col. 7, Line 10, and Col. 9, Lines 23-47). What Kawamura fails to teach is the specifics of the camera features, primarily that the camera comprises a record button, a lens, a mechanical zoom control that moves certain optical elements of the lens to different physical positions, an image sensor for receiving images viewed by the lens, and a speaker. Further, Kawamura does not disclose that the camera performs postview zooming, and that the processing circuitry creates betadata having a pointer to a file name of the recorded image, and during postview, alters the betadata to automatically increase the volume of associated audio as the image is cropped by automatically determining a scale of the gain of the audio amplifier using an original picture size as a reference However, noting the Kudo reference, Kudo teaches a camera (video camera 100) comprising a record button (trigger switch 205), a lens (lens unit 101), a mechanical zoom control that moves certain optical elements (magnification varying lenses) of the lens to different physical positions, an image sensor (CCD 102) for receiving images viewed by the lens, and a speaker (speaker unit 114) (See Figs. 1 and 2, and Col. 6, Line 54 – Col. 9, Line 5). Kudo also teaches that the camera has a postview (or playback) mode that presents the captured images on LCD display 208, wherein the images can be edited in the postview mode (See Col. 7, Lines 17-37). As for the processing circuitry creating betadata to automatically alter

the audio volume, the Kincaid reference teaches an electronic device that creates betadata (or metadata) having a pointer to a file name (track name) that corresponds to recorded audio (perceived acoustic power value stored in a database with an audio track), wherein the metadata is altered to automatically increase the volume of the audio (See Col. 4, Lines 1-17). Finally, considering the postview zooming wherein the volume of associated audio is increased as the image is cropped based on a scale using the original picture size as a reference, the Nagao reference teaches that during a postview zooming step (i.e. increasing the magnification of a captured image), the gain of the audio amplifier (amplifiers 58 and 59) is increased as the imaged is cropped (or magnified) using an original picture size (i.e. original resolution) as a reference, as is taught in Fig. 2 and Col. 4, Line 28 – Col. 5, Line 20. It would have been obvious to one of ordinary skill in the art to have included the record button, lens, image sensor, and speaker of Kudo, the betadata that is altered to control the volume of the audio (as taught by Kincaid), and the volume control in a postview zooming mode (as taught by Nagao), with the camera and automated zoom control function of Kawamura. One would have been motivated to do so because a record button, lens, mechanical zoom control, and image sensor allow the user to capture a desired scene for a preferred duration, while the speaker allows the user to hear the captured audio upon playback, thereby enabling the user to immediately verify the content of the captured scene. Further, by creating and altering betadata (or metadata) corresponding to recorded audio, the alteration of the audio based upon the zoom level is permanently attached to the recorded images, thereby allowing playback from various devices, not just the image capturing device, to have adjusted sound output volume in relation to a zoom level. And finally, as Nagao teaches in Col. 1, Lines 29-67, it is advantageous to alter the volume of captured audio when postview cropping or zooming takes place, as changes made by the user to the image data (such as zooming) can also be reflected in the audio data, giving the user a more realistic sensory observation of the postview image.

Considering **claim 7**, the limitations of claim 6 are taught above, and while Kawamura teaches a control algorithm that implements an automated zoom control function that automatically records images having different zoom levels while recording, and which, upon playback, adjusts the gain of an audio amplifier (via volume control section 15) to adjust the sound output volume in an amount related to the zoom level recorded by the zoom control function (See Fig. 1, Col. 6, Line 24 – Col. 7, Line 10, and Col. 9, Lines 23-47), the reference does not teach that the control algorithm, when viewing recorded images, creates metadata corresponding to recorded audio and alters the metadata to automatically increase the volume of the audio as apparent zoom is increased. However, as taught above with respect to claim 1, the Kincaid reference teaches an electronic device that creates metadata corresponding to recorded audio (perceived acoustic power value stored in a database with an audio track) and alters the metadata to automatically increase the volume of the audio (See Col. 4, Lines 1-17).

As for **claim 8**, the limitations of claim 6 are taught above, and the Kawamura reference teaches that the recording gain remains the same during recording (via pickup section 11), and the gain of the audio amplifier, and hence the audio output volume of a speaker (via volume control section 15) is increased during playback in an amount related to the zoom level (from zoom control section 12), as is taught in Col. 9, Lines 23-47.

Regarding **claim 9**, again the limitations of claim 6 are set forth above, and while Kudo does teach that the camera comprises a speaker (speaker unit 114) (See Figs. 1 and 2) for emitting recorded audio, and the Kawamura reference teaches that the control algorithm automatically adjusts the output audio gain (see Col. 9, Lines 23-47), neither teaches that the camera has headphones coupled thereto, and that the control algorithm automatically adjusts headphone gain. However, referring to the Kincaid reference, Kincaid teaches an electronic device having headphones coupled thereto in addition to or in lieu of a speaker (See Col. 6, Lines 33-37).

Next, considering **claim 10**, the Kawamura reference teaches a method wherein a camera (video camera or digital camera) configured to have processing circuitry (zoom control section 12) that comprises a control algorithm that implements an automated zoom control function that automatically records a plurality of images having different zoom levels while recording and adjusting the gain of an audio amplifier (via volume control section 15) to adjust the sound output volume in an amount related to the zoom level recorded by the zoom control function. Kawamura further discloses that the camera comprises an audio amplifier (19a-c) (See Fig. 1, Col. 6, Line 24 – Col. 7, Line 10, and Col. 9, Lines 23-47). What Kawamura fails to teach is the specifics of the camera features, primarily that the camera comprises a record button, a lens, an image sensor for receiving images viewed by the lens, and a speaker. Further, Kawamura does not disclose that the camera performs postview zooming, and that the processing circuitry creates betadata having a pointer to a file name of the recorded image, and during postview, alters the betadata to automatically increase the volume of associated audio as the image is cropped by automatically determining a scale of the gain of the audio amplifier using an original picture size as a reference However, noting the Kudo reference, Kudo teaches a camera (video camera 100) comprising a record button (trigger switch 205), a lens (lens unit 101), a mechanical zoom control that moves certain optical elements (magnification varying lenses) of the lens to different physical positions, an image sensor (CCD 102) for receiving images viewed by the lens, and a speaker (speaker unit 114) (See Figs. 1 and 2, and Col. 6, Line 54 – Col. 9, Line 5). Kudo also teaches that the camera has a postview (or playback) mode that presents the captured images on LCD display 208, wherein the images can be edited in the postview mode (See Col. 7, Lines 17-37). As for the processing circuitry creating betadata to automatically alter the audio volume, the Kincaid reference teaches an electronic device that creates betadata (or metadata) having a pointer to a file name (track name) that corresponds to recorded audio (perceived acoustic power value stored in a database with an audio track), wherein the metadata is altered to automatically increase the volume of the audio (See Col. 4, Lines 1-17). Finally, considering the

postview zooming wherein the volume of associated audio is increased as the image is cropped based on a scale using the original picture size as a reference, the Nagao reference teaches that during a postview zooming step (i.e. increasing the magnification of a captured image), the gain of the audio amplifier (amplifiers 58 and 59) is increased as the imaged is cropped (or magnified) using an original picture size (i.e. original resolution) as a reference, as is taught in Fig. 2 and Col. 4, Line 28 – Col. 5, Line 20. It would have been obvious to one of ordinary skill in the art to have included the record button, lens, image sensor, and speaker of Kudo, the betadata that is altered to control the volume of the audio (as taught by Kincaid), and the volume control in a postview zooming mode (as taught by Nagao), with the camera and automated zoom control function of Kawamura. One would have been motivated to do so because a record button, lens, mechanical zoom control, and image sensor allow the user to capture a desired scene for a preferred duration, while the speaker allows the user to hear the captured audio upon playback, thereby enabling the user to immediately verify the content of the captured scene. Further, by creating and altering betadata (or metadata) corresponding to recorded audio, the alteration of the audio based upon the zoom level is permanently attached to the recorded images, thereby allowing playback from various devices, not just the image capturing device, to have adjusted sound output volume in relation to a zoom level. And finally, as Nagao teaches in Col. 1, Lines 29-67, it is advantageous to alter the volume of captured audio when postview cropping or zooming takes place, as changes made by the user to the image data (such as zooming) can also be reflected in the audio data, giving the user a more realistic sensory observation of the postview image.

In regard to **claim 11**, the limitations of claim 10 are taught above, and the Nagao reference again teaches a digital zoom method wherein pixels of a recorded image are removed from the recorded image and the resultant image is scaled to its original size (i.e. the display system crops the next highest resolution image at the boundaries of the display window) to create the illusion of zoom capture, and further wherein the control algorithm adjusts the gain of the audio amplifier (gain controller 53 adjusts the

gain of amplifiers 58 and 59) as a function of the digital zoom. Please refer to Fig. 2 and Col. 4, Line 28 – Col. 5, Line 20.

As for **claim 12**, again the limitations of claim 10 are taught above, and the Kudo reference further discloses that the camera automatically records a plurality of images to capture a series of very closely related images having different zoom levels, as is shown in Col. 6, Line 54 – Col. 9, Line 5.

Considering **claim 13**, the limitations of claim 10 are set forth above, and while Kawamura teaches a control algorithm that implements an automated zoom control function that automatically records images having different zoom levels while recording, and which, upon playback, adjusts the gain of an audio amplifier (via volume control section 15) to adjust the sound output volume in an amount related to the zoom level recorded by the zoom control function (See Fig. 1, Col. 6, Line 24 – Col. 7, Line 10, and Col. 9, Lines 23-47), the reference does not teach that the control algorithm, when viewing recorded images, creates metadata corresponding to recorded audio and alters the metadata to automatically increase the volume of the audio as apparent zoom is increased. However, as taught above with respect to claim 10, the Kincaid reference teaches an electronic device that creates metadata corresponding to recorded audio (perceived acoustic power value stored in a database with an audio track) and alters the metadata to automatically increase the volume of the audio (See Col. 4, Lines 1-17).

Regarding **claim 14**, again the limitations of claim 10 are taught above, and the Kawamura reference also discloses that the method comprises keeping the gain the same during recording (via pickup section 11), and adjusting the gain of the audio amplifier, and hence the audio output volume of a speaker (via volume control section 15) during playback in an amount related to the zoom level (from zoom control section 12), as is taught in Col. 9, Lines 23-47.

Next, considering **claim 15**, the Kawamura reference teaches a method wherein a camera (video camera or digital camera) configured to have processing circuitry (zoom control section 12) that

comprises a control algorithm that implements an automated zoom control function that automatically records a plurality of images having different zoom levels while recording and adjusting the gain of an audio amplifier (via volume control section 15) to adjust the sound output volume in an amount related to the zoom level recorded by the zoom control function. Kawamura further discloses that the camera comprises an audio amplifier (19a-c) (See Fig. 1, Col. 6, Line 24 – Col. 7, Line 10, and Col. 9, Lines 23-47). What Kawamura fails to teach is the specifics of the camera features, primarily that the camera comprises a record button, a lens, an image sensor for receiving images viewed by the lens, and a speaker. Further, Kawamura does not disclose that the camera performs postview zooming, and that the processing circuitry creates betadata having a pointer to a file name of the recorded image, and during postview, alters the betadata to automatically increase the volume of associated audio as the image is cropped by automatically determining a scale of the gain of the audio amplifier using an original picture size as a reference However, noting the Kudo reference, Kudo teaches a camera (video camera 100) comprising a record button (trigger switch 205), a lens (lens unit 101), a mechanical zoom control that moves certain optical elements (magnification varying lenses) of the lens to different physical positions, an image sensor (CCD 102) for receiving images viewed by the lens, and a speaker (speaker unit 114) (See Figs. 1 and 2, and Col. 6, Line 54 – Col. 9, Line 5). Kudo also teaches that the camera has a postview (or playback) mode that presents the captured images on LCD display 208, wherein the images can be edited in the postview mode (See Col. 7, Lines 17-37). As for the processing circuitry creating betadata to automatically alter the audio volume, the Kincaid reference teaches an electronic device that creates betadata (or metadata) having a pointer to a file name (track name) that corresponds to recorded audio (perceived acoustic power value stored in a database with an audio track), wherein the metadata is altered to automatically increase the volume of the audio (See Col. 4, Lines 1-17). Finally, considering the postview zooming wherein the volume of associated audio is increased as the image is cropped based on a scale using the original picture size as a reference, the Nagao reference teaches that during a postview

zooming step (i.e. increasing the magnification of a captured image), the gain of the audio amplifier (amplifiers 58 and 59) is increased as the imaged is cropped (or magnified) using an original picture size (i.e. original resolution) as a reference, as is taught in Fig. 2 and Col. 4, Line 28 – Col. 5, Line 20. It would have been obvious to one of ordinary skill in the art to have included the record button, lens, image sensor, and speaker of Kudo, the betadata that is altered to control the volume of the audio (as taught by Kincaid), and the volume control in a postview zooming mode (as taught by Nagao), with the camera and automated zoom control function of Kawamura. One would have been motivated to do so because a record button, lens, mechanical zoom control, and image sensor allow the user to capture a desired scene for a preferred duration, while the speaker allows the user to hear the captured audio upon playback, thereby enabling the user to immediately verify the content of the captured scene. Further, by creating and altering betadata (or metadata) corresponding to recorded audio, the alteration of the audio based upon the zoom level is permanently attached to the recorded images, thereby allowing playback from various devices, not just the image capturing device, to have adjusted sound output volume in relation to a zoom level. And finally, as Nagao teaches in Col. 1, Lines 29-67, it is advantageous to alter the volume of captured audio when postview cropping or zooming takes place, as changes made by the user to the image data (such as zooming) can also be reflected in the audio data, giving the user a more realistic sensory observation of the postview image.

Considering **claim 16**, the limitations of claim 15 are set forth above, and while Kawamura teaches a control algorithm that implements an automated zoom control function that automatically records images having different zoom levels while recording, and which, upon playback, adjusts the gain of an audio amplifier (via volume control section 15) to adjust the sound output volume in an amount related to the zoom level recorded by the zoom control function (See Fig. 1, Col. 6, Line 24 – Col. 7, Line 10, and Col. 9, Lines 23-47), the reference does not teach that the control algorithm, when viewing recorded images, creates metadata corresponding to recorded audio and alters the metadata to

automatically increase the volume of the audio as apparent zoom is increased. However, as taught above with respect to claim 15, the Kincaid reference teaches an electronic device that creates metadata corresponding to recorded audio (perceived acoustic power value stored in a database with an audio track) and alters the metadata to automatically increase the volume of the audio (See Col. 4, Lines 1-17).

In regard to **claim 17**, the method of claim 15 is taught above, and the Kawamura reference also discloses that the method comprises keeping the gain the same during recording (via pickup section 11), and adjusting the gain of the audio amplifier, and hence the audio output volume of a speaker (via volume control section 15) during playback in an amount related to the zoom level (from zoom control section 12), as is taught in Col. 9, Lines 23-47.

Next, regarding **claim 18**, the Kawamura reference teaches a camera (video camera or digital camera) comprising processing means (zoom control section 12) that implements an automated zoom control function that automatically records images having different zoom levels while recording, and which, upon playback, adjusts the gain of an audio amplifier (via volume control section 15) to adjust the sound output volume in an amount related to the zoom level recorded by the zoom control function. Kawamura further discloses that the camera comprises an audio apparatus (amplifier 19a-c) (See Fig. 1, Col. 6, Line 24 – Col. 7, Line 10, and Col. 9, Lines 23-47). What Kawamura fails to teach is the specifics of the camera features, primarily that the camera comprises a record button, a lens, an image sensor for receiving images viewed by the lens, and a speaker. Further, Kawamura does not disclose that the camera performs postview zooming, and that the processing circuitry creates betadata having a pointer to a file name of the recorded image, and during postview, alters the betadata to automatically increase the volume of associated audio as the image is cropped by automatically determining a scale of the gain of the audio amplifier using an original picture size as a reference. However, noting the Kudo reference, Kudo teaches a camera (video camera 100) comprising a record button (trigger switch 205), a lens (lens unit 101), an

image sensor (CCD 102) for receiving images viewed by the lens, and a speaker (speaker unit 114) (See Figs. 1 and 2, and Col. 6, Line 54 – Col. 9, Line 5). Kudo also teaches that the camera has a postview (or playback) mode that presents the captured images on LCD display 208, wherein the images can be edited in the postview mode (See Col. 7, Lines 17-37). As for the processing circuitry creating betadata to automatically alter the audio volume, the Kincaid reference teaches an electronic device that creates betadata (or metadata) having a pointer to a file name (track name) that corresponds to recorded audio (perceived acoustic power value stored in a database with an audio track), wherein the metadata is altered to automatically increase the volume of the audio (See Col. 4, Lines 1-17). Finally, considering the postview zooming wherein the volume of associated audio is increased as the image is cropped based on a scale using the original picture size as a reference, the Nagao reference teaches that during a postview zooming step (i.e. increasing the magnification of a captured image), the gain of the audio amplifier (amplifiers 58 and 59) is increased as the imaged is cropped (or magnified) using an original picture size (i.e. original resolution) as a reference, as is taught in Fig. 2 and Col. 4, Line 28 – Col. 5, Line 20. It would have been obvious to one of ordinary skill in the art to have included the record button, lens, image sensor, and speaker of Kudo, the betadata that is altered to control the volume of the audio (as taught by Kincaid), and the volume control in a postview zooming mode (as taught by Nagao), with the camera and automated zoom control function of Kawamura. One would have been motivated to do so because a record button, lens and image sensor allow the user to capture a desired scene for a preferred duration, while the speaker allows the user to hear the captured audio upon playback, thereby enabling the user to immediately verify the content of the captured scene. Further, by creating and altering betadata (or metadata) corresponding to recorded audio, the alteration of the audio based upon the zoom level is permanently attached to the recorded images, thereby allowing playback from various devices, not just the image capturing device, to have adjusted sound output volume in relation to a zoom level. And finally, as Nagao teaches in Col. 1, Lines 29-67, it is advantageous to alter the volume of captured audio

when postview cropping or zooming takes place, as changes made by the user to the image data (such as zooming) can also be reflected in the audio data, giving the user a more realistic sensory observation of the postview image.

Considering **claim 19**, the limitations of claim 18 are taught above, and while Kawamura teaches a processing means (zoom control section 12) that adjusts the gain of the audio apparatus as a function of zoom position (See Col. 9, Lines 23-47), Kawamura fails to teach that the processing means specifically comprises a mechanical zoom control that moves certain optical elements in the lens to different physical positions. However, the Kudo reference teaches a mechanical zoom lens (lens unit 101) in which certain optical elements (magnification varying lenses) are moved to different physical positions, as taught in Col. 8, Lines 1-10.

Finally, in regard to **claim 20**, the limitations of claim 18 are taught above, and the Nagao reference again teaches a digital zoom control wherein pixels of a recorded image are removed from the recorded image and the resultant image is scaled to its original size (i.e. the display system crops the next highest resolution image at the boundaries of the display window) to create the illusion of zoom capture, and wherein the control algorithm adjusts the gain of the audio amplifier (gain controller 53 adjusts the gain of amplifiers 58 and 59) as a function of the digital zoom. Please refer to Fig. 2 and Col. 4, Line 28 – Col. 5, Line 20.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Nishida (U.S. Pat. 6,040,831): See Figs. 3A-3B and Col. 7, Lines 9-55

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory V. Madden whose telephone number is 571-272-8128. The examiner can normally be reached on Mon.-Fri. 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Yen Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gregory Madden
July 27, 2007

NGOC-YEN VU
SUPERVISORY PATENT EXAMINER